

SEQUENCE LISTING

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McCall, Catherine A.
Weber, Eric R.

<120> CANINE AND FELINE IMMUNOREGULATORY PROTEINS, NUCLEIC
ACID MOLECULES, AND USES THEREOF

<130> IM-2-C1-C1

<140> not yet assigned
<141> 2001-01-05

<150> 09/322,409
<151> 1999-05-28

<150> 60/087,306
<151> 1998-05-29

<160> 21

<170> PatentIn Ver. 2.1

<210> 1
<211> 16
<212> DNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
Primer

<400> 1

atgcactttc tttgcc

16

<210> 2
<211> 42
<212> DNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
Primer

<400> 2

ctggaggaaa akacttcrat gattctgata tctgaaaat at

42

<210> 3
 <211> 27
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic Primer

<400> 3
 ctgacycttk sttggscctc attctca 27

<210> 4
 <211> 610
 <212> DNA
 <213> Canis familiaris

<220>
 <221> CDS
 <222> (29)..(430)

<400> 4
 caaggcaaac actgaacatt tcagagct atg aga atg ctt ctg aat ttg agt 52
 Met Arg Met Leu Leu Asn Leu Ser
 1 5

ttg cta gct ctt ggg gct gcc tat gtt tct gcc ttt gct gta gaa aat 100
 Leu Leu Ala Leu Gly Ala Ala Tyr Val Ser Ala Phe Ala Val Glu Asn
 10 15 20

ccc atg aat aga ctg gtg gca gag acc ttg aca ctg ctc tcc act cat 148
 Pro Met Asn Arg Leu Val Ala Glu Thr Leu Thr Leu Ser Thr His
 25 30 35 40

cga act tgg ctg ata ggc gat ggg aac ctg atg att cct act cct gaa 196
 Arg Thr Trp Leu Ile Gly Asp Gly Asn Leu Met Ile Pro Thr Pro Glu
 45 50 55

aat aaa aat cac caa ctg tgc att aaa gaa gtt ttt cag ggt ata gac 244
 Asn Lys Asn His Gln Leu Cys Ile Lys Glu Val Phe Gln Gly Ile Asp
 60 65 70

aca ttg aag aac caa act gcc cac ggg gag gct gtg gat aaa cta ttc 292
 Thr Leu Lys Asn Gln Thr Ala His Gly Glu Ala Val Asp Lys Leu Phe
 75 80 85

caa aac ttg tct tta ata aaa gaa cac ata gag cgc caa aaa aaa agg 340
Gln Asn Leu Ser Leu Ile Lys Glu His Ile Glu Arg Gln Lys Lys Arg
90 95 100

tgt gca gga gaa aga tgg aga gtg aca aag ttc cta gac tac ctg caa 388
Cys Ala Gly Glu Arg Trp Arg Val Thr Lys Phe Leu Asp Tyr Leu Gln
105 110 115 120

gta ttt ctt ggt gta ata aac acc gag tgg aca ccg gaa agt 430
Val Phe Leu Gly Val Ile Asn Thr Glu Trp Thr Pro Glu Ser
125 130

tgagaacaaa ccggcttatt gtatgttggaaag attttggaga agaatggttt tttggcgatg 490

agaatgaggg ccaaccaaca gtagggactt aatggccagt ataactaagc ttcagagaca 550

aagtaaatat ttcaggcattc ctactacttt atcacttcac acagatgaaa tatatttgag 610

<210> 5
<211> 134
<212> PRT
<213> Canis familiaris

<400> 5
Met Arg Met Leu Leu Asn Leu Ser Leu Leu Ala Leu Gly Ala Ala Tyr
1 5 10 15

Val Ser Ala Phe Ala Val Glu Asn Pro Met Asn Arg Leu Val Ala Glu
20 25 30

Thr Leu Thr Leu Leu Ser Thr His Arg Thr Trp Leu Ile Gly Asp Gly
35 40 45

Asn Leu Met Ile Pro Thr Pro Glu Asn Lys Asn His Gln Leu Cys Ile
50 55 60

Lys Glu Val Phe Gln Gly Ile Asp Thr Leu Lys Asn Gln Thr Ala His
65 70 75 80

Gly Glu Ala Val Asp Lys Leu Phe Gln Asn Leu Ser Leu Ile Lys Glu
85 90 95

His Ile Glu Arg Gln Lys Lys Arg Cys Ala Gly Glu Arg Trp Arg Val
100 105 110

Thr Lys Phe Leu Asp Tyr Leu Gln Val Phe Leu Gly Val Ile Asn Thr

115

120

125

Glu Trp Thr Pro Glu Ser
130

<210> 6
<211> 610
<212> DNA
<213> Canis familiaris

<400> 6
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tgtctctgaa gcttagttat actggccatt aagtccctac tgggttgg ccctcattct 120
catcgccaaa aaaccattct tctccaaaat cttccactac aataagccgg tttgttctca 180
actttccgggt gtccactcgg tggatttacc accaagaaat acttgcaggt agtcttaggaa 240
cttgcact ctccatcttt ctccgtcaca cttttttttt tggcgtctta tgtgttcttt 300
tattaaagac aagtttgaa atagtttac cacagcctcc ccgtgggcag tttgggtctt 360
caatgtgtct ataccctgaa aaacttcttt aatgcacagt tggtgattt tattttcagg 420
agtaggaatc atcaggttcc catcgccat cagccaagtt cgtgagtgag agacgtgt 480
caaggtctct gccaccagtc tattcatggg atttctaca gcaaaggcag aaacataggc 540
agccccaaaga gctagcaaacc tcaaattcag aagcattctc atagctctga aatgttca 600
gtttgccttg 610

<210> 7
<211> 402
<212> DNA
<213> Canis familiaris

<400> 7
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gctgtagaaa atcccatgaa tagactggtg gcagagacct tgacactgct ctccactcat 120
cgaacttggc tggataggcga tggaaacctg atgattccta ctcctgaaaa taaaatcac 180
caactgtgca ttaaagaagt tttcagggt atagacacat tgaagaaccca aactgcccac 240
ggggaggctg tggataaaact atccaaaac ttgtctttaa taaaagaaca catagagcgc 300
caaaaaaaaaa ggtgtgcagg agaaagatgg agagtgacaa agttcctaga ctacctgcaa 360
gtatttcttg gtgtataaaa caccgagtgg acaccggaaa gt 402

<210> 8
<211> 402
<212> DNA
<213> Canis familiaris

<400> 8
actttccgggt gtccactcgg tggatttacc accaagaaat acttgcaggt agtcttaggaa 60
actttccgggt gtccactcgg tggatttacc accaagaaat acttgcaggt agtcttaggaa 60

ctttgtca ctccatctt ctccgtcaca cctttttt tggcgctcta tgtgttctt 120
 tattaaagac aagtttgaa atagtttac cacagcctcc ccgtggcag tttggttctt 180
 caatgtgtct ataccctgaa aaacttctt aatgcacagt tggtgatttt tatttcagg 240
 agtaggaatc atcagggttcc catcgccat cagccaagtt cgatgagtgg agagcagtgt 300
 caaggtctct gccaccagtc tattcatggg attttctaca gcaaaggcag aaacataggc 360
 agccccaaaga gctagcaaac tcaaattcag aagcattctc at 402

<210> 9
 <211> 345
 <212> DNA
 <213> Canis familiaris

<220>
 <221> CDS
 <222> (1)..(345)

<400> 9
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 Phe Ala Val Glu Asn Pro Met Asn Arg Leu Val Ala Glu Thr Leu Thr
 1 5 10 15

ctg ctc tcc act cat cga act tgg ctg ata ggc gat ggg aac ctg atg 96
 Leu Leu Ser Thr His Arg Thr Trp Leu Ile Gly Asp Gly Asn Leu Met
 20 25 30

att cct act cct gaa aat aaa aat cac caa ctg tgc att aaa gaa gtt 144
 Ile Pro Thr Pro Glu Asn Lys Asn His Gln Leu Cys Ile Lys Glu Val
 35 40 45

ttt cag ggt ata gac aca ttg aag aac caa act gcc cac ggg gag gct 192
 Phe Gln Gly Ile Asp Thr Leu Lys Asn Gln Thr Ala His Gly Glu Ala
 50 55 60

gtg gat aaa cta ttc caa aac ttg tct tta ata aaa gaa cac ata gag 240
 Val Asp Lys Leu Phe Gln Asn Leu Ser Leu Ile Lys Glu His Ile Glu
 65 70 75 80

cgc caa aaa aaa agg tgt gca gga gaa aga tgg aga gtg aca aag ttc 288
 Arg Gln Lys Lys Arg Cys Ala Gly Glu Arg Trp Arg Val Thr Lys Phe
 85 90 95

cta gac tac ctg caa gta ttt ctt ggt gta ata aac acc gag tgg aca 336
 Leu Asp Tyr Leu Gln Val Phe Leu Gly Val Ile Asn Thr Glu Trp Thr
 100 105 110

ccg gaa agt 345
 Pro Glu Ser

<210> 10
 <211> 115
 <212> PRT
 <213> Canis familiaris

<400> 10
 Phe Ala Val Glu Asn Pro Met Asn Arg Leu Val Ala Glu Thr Leu Thr
 1 5 10 15
 Leu Leu Ser Thr His Arg Thr Trp Leu Ile Gly Asp Gly Asn Leu Met
 20 25 30
 Ile Pro Thr Pro Glu Asn Lys Asn His Gln Leu Cys Ile Lys Glu Val
 35 40 45
 Phe Gln Gly Ile Asp Thr Leu Lys Asn Gln Thr Ala His Gly Glu Ala
 50 55 60
 Val Asp Lys Leu Phe Gln Asn Leu Ser Leu Ile Lys Glu His Ile Glu
 65 70 75 80
 Arg Gln Lys Lys Arg Cys Ala Gly Glu Arg Trp Arg Val Thr Lys Phe
 85 90 95
 Leu Asp Tyr Leu Gln Val Phe Leu Gly Val Ile Asn Thr Glu Trp Thr
 100 105 110
 Pro Glu Ser
 115

<210> 11
 <211> 345
 <212> DNA
 <213> Canis familiaris

<400> 11
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 ctttgtcaact ctccatcttt ctcctgcaca cctttttttt tggcgctcta tgtgttcttt 120
 tattaaagac aagttttgaa atagtttatac cacagcctcc ccgtgggcag tttggttttt 180
 caatgtgtct ataccctgaa aaaccttcttt aatgcacagt tggtgatttt tattttcagg 240
 agtaggaatc atcaggttcc catgcctat cagccaagtt cgtatgagtgg agagcagtgt 300
 caaggtctct gccaccagtc tattcatggg attttctaca gcaaa 345

<210> 12
<211> 36
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
Primer

<400> 12
gggctcgaga aaagattgc tgttagaaaat cccatg 36

<210> 13
<211> 32
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
Primer

<400> 13
cccgcgccg ctcaacttgc cggtgtccac tc 32

<210> 14
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
Primer

<400> 14
aggcaaacac tgaacatttc 20

<210> 15
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
Primer

Project ID: 20000000000000000000000000000000

<400> 15
tctccaaaat cttccactac 20

<210> 16
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic Primer

<400> 16
tcaagggagg ctataaattc 20

<210> 17
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic Primer

<400> 17
ttatagtcaa gggcatatcc 20

<210> 18
<211> 1658
<212> DNA
<213> Canis familiaris

<220>
<221> intron
<222> (171)..(373)

<220>
<221> intron
<222> (407)..(1275)

<220>
<221> intron
<222> (1405)..(1522)

<400> 18

aggcaaacac tgaacatttc agagctatga gaatgcttct gaatttgagt ttgctagctc 60
 ttggggctgc ctatgttct gccttgctg tagaaaatcc catgaataga ctgggtggcag 120
 agaccttgac actgctctcc actcatcgaa ctggctgat aggcgatggg gtaatttct 180
 ttttgcattcc tacagtcttt aaaatgcatg ggttaattggt ggtgggtggct agttttaaa 240
 gatccattat caataatgaa gtaatgagtg ttaataatata ataatggta accatgttac 300
 tcagaagaat tatattaaaa gttatgaacc ttacaataca ttaaaaaatga atgttgc 360
 ctgcattttt cagaacctga tgattcctac tcctgaaaat aaaaatgtaa gttaaattat 420
 gattgataa aatgattaca tgaatcagtt tcataattta agctataaaag tatcagttaa 480
 cattggatg atttaatttt atctattttg ttttatgtg tgccgatgt aattatgtgc 540
 ttatgaatat taggaatggt gtaggaatg gctctacaat attaagtaga atccattaag 600
 caagtggatc aggccctttt ttgatgttgc cagttccca tctcaaagag cctcggtca 660
 ggcattctt ccaaaaagaat tccatattgg gtcagagata ctcccttaggc tccattcacc 720
 tctgtcggttgc ctttcctca cctcaacgtt tttctgaaaag tactagcaac ttggggttat 780
 atttttagaa ttatggtcag tagacatgaa aatatacagt gaagtcctat attaatagtc 840
 acttccacat atttaaatga ttttaactc taatggaatc atatacatct ggagtatgtc 900
 atggcatat taaaatgtta aaaaatgtat atcattagtc taaatagaat aaaaattacca 960
 gctagaacta tacgaggaaa ttctgaggtg aggtaaatca gtaaggcagt tgtattatac 1020
 ctcgtaaagca tttattttt attaattcatt tcatttat catttgtaac acttctcagt 1080
 aattatataa acatcattta ctatggtaa ttatagctt gtataagggtt gtttcccacc 1140
 tggaaaagac acaagtaaaa acctcttggg agaagggaaac ttgtgtaaac cccacaaaac 1200
 aaagtctaac ttttggacc aaattttat gcctgtttt gatgaattat atttttaaa 1260
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 aagaacccaa ctgcccacgg ggaggctgtg gataaactat tccaaaactt gtcttaata 1380
 aaagaacaca tagagcgcacca aaaaatgtt taaagacatt tggcaaaaac ttaagtat 1440
 ttgtctgact ctgcctgttt tttttttttt ttttacaag aattgacagt ttcctacaat 1500
 atcttcctctg ttcttttaac agaaaaagggtg tgcaggagaa agatggagag tgacaaagtt 1560
 cctagactac ctgcaagtat ttcttggtgt aataaacacc gagtggacac cggaaagttg 1620
 agaacaaacc ggcttattgt agtggaaagat tttggaga 1658

<210> 19

<211> 1658

<212> DNA

<213> Canis familiaris

<400> 19

tctccaaaat cttccactac aataagccgg tttgttctca actttccgggt gtccactcgg 60
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 ctcctgcaca cttttctgt taaaagaaca gaggagat ttttagaaac tgtcaattct 180
 tggaaaaaaa aaaaaaaaaa acaggcagag tcagacaaat atacttaatg ttttgcacaa 240
 ttttttttac ttacttttg gcgcctatgt ttttgcatttta ttaaagacaa gttttggat 300
 agtttattcca cagcctcccc gtggggcagtt tggttttca atgtgtctat accctgaaaa 360
 acttctttaa tgcacagttt gtgcataatg aggaagattt taaaatataat aattcatcaa 420
 aacaaggcat aaaaatttgg tccaaaatgtt agactttgtt ttgtgggggt tacacaagtt 480
 cccttcctccc aagaggtttt tacttgcgtc ttttccgggt gggaaaccac cttataactaa 540
 gctataatta ccataagtaa atgatgttta tataattact gagaagtgtt acaaatgata 600
 taaatgaaat gattaatgaa aaataaaatgc ttacgaggta taataacaact gccttactga 660

tttacctcac ctcagaattt cctcgtatag ttcttagtgg taattttatt ctattnagac 720
taatgtatatc acattttaaa cattttaata tgaccatgac atactccaga tgtatatgt 780
tccatttagag ttaaaaatca tttaaatatg tggaagtgc tatataatata ggacttcact 840
gtatattttc atgtctactg accataattc taaaatata accccaagtt gcttagtactt 900
tcagaaaaac gttgagggtga ggaaagccaa cgacagaggt gaatggagcc taggaagtt 960
ctctgaccca atatgaaatt cttttggaaa gaatgcctga cacgaggctc tttgagatgg 1020
agaactgaca acatcaaaaa agggcctgat ccacttgctt aatggattct acttaatatt 1080
gtagagccat tcctaaccacc attcctaata ttctataagca cataattac atccgcacac 1140
ataaaaaacaa aatagataaa attaaatcat cccaatgtt actgataactt tatagcttaa 1200
aatatgaaac tgattcatgt aatcattttc tcaaattata atttaactta catttttatt 1260
ttcaggagta ggaatcatca ggttctgaaa aagaaaggaa acaacattca ttttaatgt 1320
attgtaaggt tcataacttt taatataatt cttctgagta acatggttac ccatttat 1380
attattaaca ctcattactt cattattgt aatggatctt taaaacttag ccaccaccac 1440
caattaccca tgcattttaa agactgttagg aatcaaaaag aaaattaccc catcgctat 1500
cagccaagtt cgatgagtgg agagcagtgt caaggctct gccaccagtc tattcatggg 1560
atttctaca gcaaaggcag aaacataggc agccccaaaga gctagcaaac tcaaattcag 1620
aagcattgtc atagctctga aatgttcagt gtttgct 1658

<210> 20
<211> 15
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: N-terminal
peptide

<400> 20
Phe Ala Val Glu Asn Pro Met Asn Arg Leu Val Ala Glu Thr Leu
1 5 10 15

<210> 21
<211> 671
<212> DNA
<213> Canis familiaris

<400> 21
aggcaaacac tgaacatttc agagctatga gaatgcttct gaatttgagt ttgctagctc 60
ttggggctgc ctatgtttct gcctttgctg tagaaaatcc catgaataga ctgggtggcag 120
agaccttgcac actgctctcc actcatcgaa cttggctgtt aggcgatggg gtaattttct 180
ttttgattcc tacagtcttt aaaaatgcattt ggttaatgggt ggtgggtggct agtttttaaa 240
gatccattat caataatgaa gtaatgagtg ttaataatata ataatgggtt accatgttac 300
tcagaagaat tatattaaaaa gttatgaacc ttacaataca ttaaaaatga atgttgttcc 360
cttctttttt cagaacctga tgattcctac tcctgaaaat aaaaatcacc aactgtgcatt 420
taaagaagtt tttcagggtt tagacacattt gaagaaccaactgcccacg gggaggctgt 480
ggataaaacta ttccaaaact tgcattttat aaaaagaacac atagagcgcc aaaaaaaaaag 540

gtgtgcagga gaaaagatgga gagtgacaaa gttcctagac tacctgcaag tatttcttgg 600
tgtaataaac accgagtgga caccggaaag ttgagaacaa accggcttat tgtagtggaa 660
gattttggag a 671